wicked lasers
NANO
User's Manual and Laser Safety Guide

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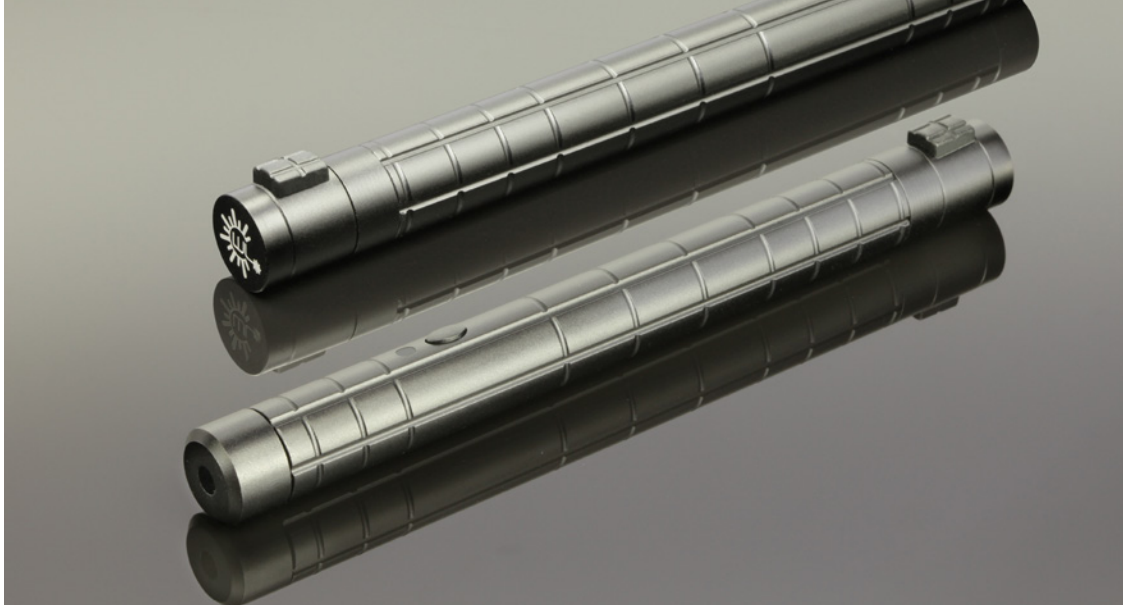
www.wickedlasers.com

FOREWORD

First and foremost, **we are laser enthusiasts**. We desire nothing more than to achieve perfection in our craft. For us, pushing the limits of technology is part of our daily routine. It's only impossible if we don't try.

As we continue to advance in our search for perfection, we've set benchmarks for others to follow and new limits for us to test. This is our mission. We plan to continually push the boundaries of technology and create products that challenge the imagination far into the future.

wicked lasers



GUINNESS
WORLD RECORDS
CERTIFICATE
The Spyder Green 300 is the most powerful battery powered handheld laser commercially available. Made by Wicked Lasers (China), the class IIIb device has an average output of 300 milliWatts (mW) with peak readings of 420 mW. At close range it can ignite matches, cut tape and pop balloons.

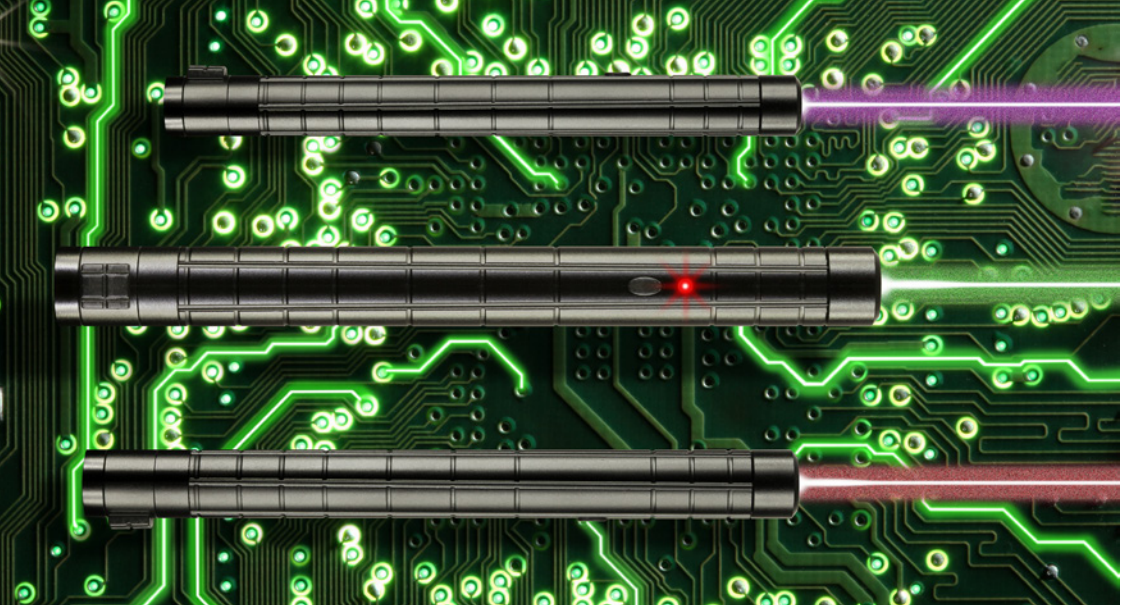
We wanted to create the world's most powerful handheld laser - we succeeded and inadvertently set a world record in doing so. We are extremely proud to be included in the **Guinness Book of World Records for 2007**. This will serve as a testament to our commitment to providing the world with the most sophisticated laser products technology can offer.

Designed and developed by some of the world's best engineers, the **Spyder Series** stands at the pinnacle of laser technology. Lithium powered, water-resistant and ultimately powerful, the **Spyder Series** is our most advanced line of handheld lasers to date.

We still have much to prove as there is still a world of possibilities in front of us. Our quest to turn science fiction into reality has only just begun.

Table of Contents

The Nano	3
Technical Specifications	3
The Nano Laser Diagram	4
Using Your Laser	5
FDA Compliant Endcap Diagram	6
Using Your FDA Compliant Endcap	7
Warning Labels	8
Safety and Maintenance	9
Lens Cleaning Procedure and Troubleshooting	10
Types of Common Lens Problems	11
Limitation of Liability	12
Manufacturer's Warranty	13



Nano Series

Stronger, Brighter, Clearer, Better, the Nano is the laser for professionals – true professionals. The green Nano produces up to 15mW of power, enabling you to point with precision from across a football field and it comes with a digital microprocessor that allows you to double-click to keep the laser in on mode indefinitely.

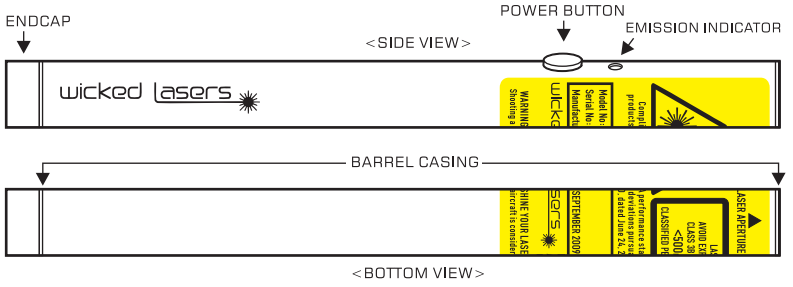
All of our Nano lasers are powered by two standard AAA batteries with a digital microprocessor which ensures your laser puts out exactly the same beam from the instant you put batteries in to the last second of their power – no unprofessional flickering or fading at a critical moment.

We guarantee that there is no more powerful handheld laser of this size available on the market today with the necessary safety compliance that will let you safely, creatively, and responsibly – awe the people who know them.

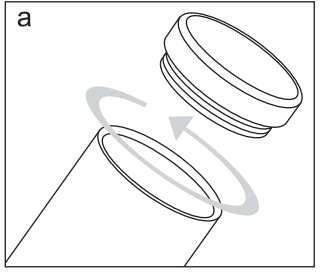
Model Name:	Nano Series		
Laser Product Class:	3B		
Size:	16.5 x 170mm		
Weight:	70g		
Laser Body:	T6061 Aircraft-Grade Aluminum		
Wavelength:	405 nm	532 nm	650 nm
Minimum Power	75mW	15mW	100mW
Beam Divergence:	<0.5 mRad	<1.2 mRad	<0.5 mRad
Beam Diameter:	<4.0 mm	<2.5 mm	<4.0 mm
NOHD*	61 meters	47 meters	82 meters
Required Eyewear O.D.	1.7		
Power Consumption:	<500mA		
Power supply:	2 X AAA 1.5V		
Battery Lifetime:	30 - 60 minutes		
Modes:	Momentary On / Off and Constant On		
Duty Cycle:	Continous		
Expected lifetime:	>5,000 hours		
Warranty:	12 Months		

*Nominal Occular Hazard Distances are for 0.25 second accidental (unaided eye) exposure.

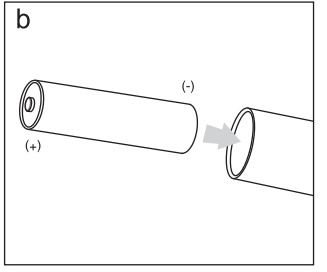
Laser Diagram



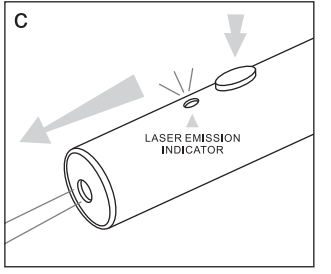
Using Your Laser



At the back of the laser, rotate endcap counter clockwise to open.

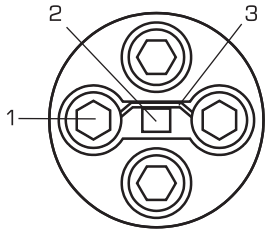


Insert two AAA batteries with the **negative (-)** end first.

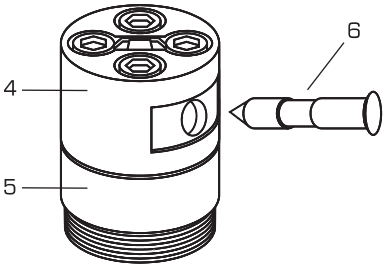


Press button for normal operation. **Double-click** the button to enable constant ON mode.

FDA Compliant Endcap Diagram



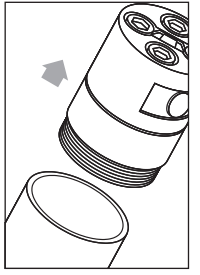
Top View



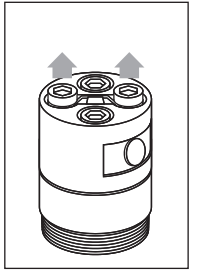
Perspective View

1. Interlock Connection Point
2. Switch Contact / Spring
3. Jumper Wire
4. Remote Interlock Housing
5. Battery Cap
6. Key Control

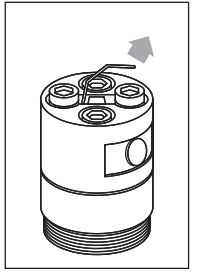
Using Your **FDA Compliant Endcap**



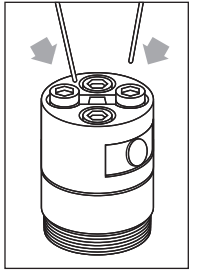
Detach FDA Series end cap from laser.



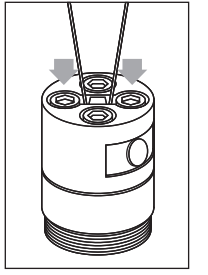
Unscrew remote interlock connection points.



Remove jumper wire.



Hook up remote switch wires.

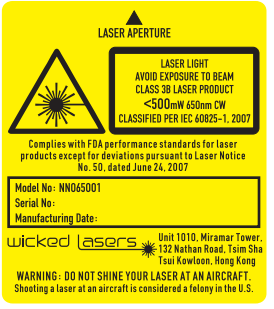


Screw remote interlock connection points back in place.

Laser Warning Labels

LASER APERTURE
LASER LIGHT
AVOID EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT
<500mW 532nm CW
CLASSIFIED PER IEC 60825-1, 2007
Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007
Model No: NN053201
Serial No:
Manufacturing Date:
wicked lasers
Unit 1010, Miramar Tower, 132 Nathan Road, Tsim Sha Tsui Kowloon, Hong Kong
WARNING: DO NOT SHINE YOUR LASER AT AN AIRCRAFT.
Shooting a laser at an aircraft is considered a felony in the U.S.

Class 3B 532nm


LASER APERTURE
LASER LIGHT
AVOID EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT
<500mW 650nm CW
CLASSIFIED PER IEC 60825-1, 2007
Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007
Model No: NN065001
Serial No:
Manufacturing Date:
wicked lasers
Unit 1010, Miramar Tower, 132 Nathan Road, Tsim Sha Tsui Kowloon, Hong Kong
WARNING: DO NOT SHINE YOUR LASER AT AN AIRCRAFT.
Shooting a laser at an aircraft is considered a felony in the U.S.

Class 3B 650nm

LASER APERTURE
LASER LIGHT
AVOID EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT
<500mW 405nm CW
CLASSIFIED PER IEC 60825-1, 2007
Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007
Model No: NN040501
Serial No:
Manufacturing Date:
wicked lasers
Unit 1010, Miramar Tower, 132 Nathan Road, Tsim Sha Tsui Kowloon, Hong Kong
WARNING: DO NOT SHINE YOUR LASER AT AN AIRCRAFT.
Shooting a laser at an aircraft is considered a felony in the U.S.

Class 3B 405nm

Safety and Maintenance

CAUTION - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. **No scheduled maintenance necessary to keep the product in compliance.** Simply keep the laser free from dust or other contaminates that could cloud or dirty the laser lens or crystal array and operate within recommended parameters.

2. **Avoid direct eye and skin exposure to the laser beam.** Direct contact with the beam can instantly cause severe and irreparable eye damage. Note that a reflected laser beam can be just as powerful as directly coming from the laser unit itself.

3. We strongly recommend using the LaserShades that come with this laser or wearing similar approved laser safety eyewear.

4. **Do not take apart, modify or dismantle the laser** or operate it under abnormal current load (doing so will void the warranty). **Strictly no service is allowed.**

5. Operate your laser only within the specified temperature range of 10°C (50°F) to 40°C (104°F).

6. Should you have difficulty operating the laser properly and troubleshooting does not work, go to www.wickedlasers.com for support and **RMA** assistance if necessary. **Do not attempt to service, modify or fix the laser yourself.**

7. **Do not shine your laser at an aircraft.** It may cause a distraction to the pilots putting the aircraft's passangers at considerable risk. **Shooting a laser at an aircraft is considered a felony in the U.S.**

*For more safety information & guidance please refer to **ANSI Z136.1 (2007) Safe Use of Lasers** available at the Laser Institute of America website: **www.laserinstitute.org**

Lens Cleaning Procedure and Troubleshooting

What you need :

1. **Microfiber Cloth** - Please make sure the microfiber cloth is specifically designed for cleaning lenses. You can find this at your local camera or glasses store.

2. **Q-Tip or Tooth Pick** - You will need to fold the cloth over one of these in order to be able to reach the lens properly.

3. **Lens Cleaning Solutions** (Optional) - Use the lens cleaning solution only if the lens is not cleaned using the microfiber cloth alone. Please make sure the cleaning solution is designed specifically for lens cleaning.

WARNING : DO NOT USE WATER

Procedure :

1. Wash your hand with soap and water. Make sure to dry them properly.

2. Remove the batteries from your laser prior to cleaning.

3. Fold the microfibre cloth over a toothpick or the handle part of a Q-tip. Make sure you do not touch the part of the cloth that will be cleaning the lens. You probably will not be able to fold the cloth twice, so you need to be very careful not to press too hard on the lens.

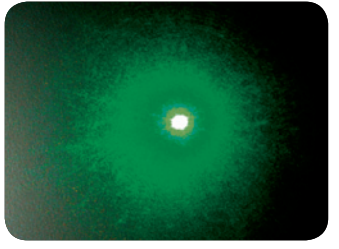
4. Gently move the cloth into the aperture until it comes in contact with the lens. Rub it from side to side but do not press too hard. Gently rotate the cloth in a twisting motion back and forth. Repeat this procedure until the lens of your laser is clean.

5. Re-insert the batteries and turn your laser unit on to see if the lens is clean.

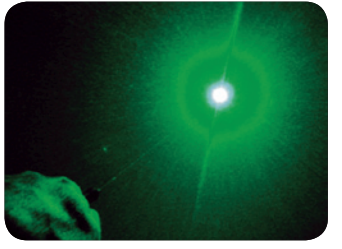
6. **Still dirty?** Apply only 1 drop of **Lens Cleaning Solution** to the part of the cloth that will be cleaning the lens, the follow the same procedure as above. You will want to finish by using a dry part of the cloth to wipe the lens dry, this should take one pass side to side or gentle rotate.

Types of Common **Lens Problems**

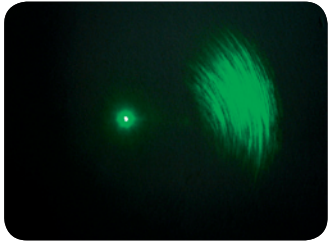
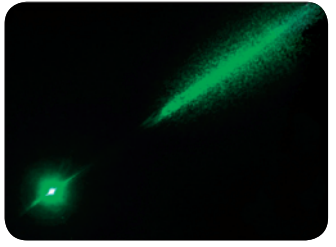
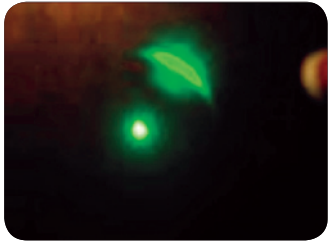
1. **Dirty Lens -** The most common problem with your laser unit is a dirty lens. The easiest way to determine whether you have a dirty lens is to look at the lens under direct light. If you see smudges, finger prints, or small particles on the lens, the beam emitted will look similar to the above pictures. Simply follow the cleaning instructions to restore the spot back to a focused dot.



2. **Scratched Lens -** A scratched lens may occur if you accidentally scratch the lens with a hard or rough surface. The lens of your laser unit is similar to that of a camera, please handle with care. This condition can be repaired by Wicked Lasers, however, will not be covered in your warranty. A repair cost will apply.

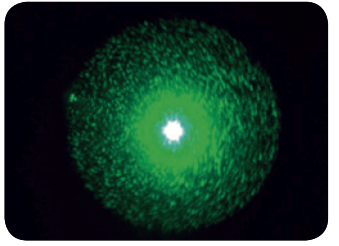


Types of Common **Lens Problems**

3. **Mode Shifts -** A mode shift may occur under extreme temperatures. If your laser unit is too hot or too cold, the beam may appear unstable and look similar to the above pictures. Please note that as your laser "warms up" and returns to room temperature, the beam will return to normal mode, TEM00. The normal operating temperature of all Wicked Laser products is 10ºC ~ 40ºC. Using your laser unit beyond these parameters will damage your laser beyond repair.

Types of Common **Lens Problems**



4. **Moisture -** We do not recommend using any laser products in highly humid or foggy conditions. If your laser unit is used in these conditions and/or submerged in water, the beam may appear similar to the above picture. You will not be able to clean this as water has condensed inside the lens and/or crystal set. This condition can be repaired by Wicked Lasers, however, will not be covered in your warranty. A repair cost will apply.

   *This condition may occur if you are using the laser unit with wet hands. Please dry your hands completely before handling your laser unit.

Limitation of Liability

In no event shall Wicked Lasers or any of its subsidiaries or affiliates be liable for any indirect, special, incidental or consequential injury to persons or damage to property caused by the use of any of our products. By purchasing from Wicked Lasers, you hereby indicate that you understand and agree to the following:

- I am 18 years of age or older.
- I am fully responsible for the safe application and use of this laser and agree to such by completing the sale process.
- I will never look directly into the beam or point the beam at any person's or animal's skin, eyes or other body part.
- I will not point the laser at any aircraft or moving vehicle of any sort.
- I will not use a laser device without wearing approved laser safety goggles designed for such purpose.
- I will never remove the laser's infrared filter.

I will not use the laser in violation of any local, state or federal law, and I understand that it is my responsibility to know and abide by those laws relating to the ownership and use of lasers in my jurisdiction.

Manufacturer's Warranty

All Nano Series lasers come with a standard 12 Month Manufacturer's Warranty. Our warranty guarantees your laser to be free from defects in manufacture and workmanship.

All defective lasers will be replaced or repaired subject to the full discretion of Wicked Lasers.

Ownership of the warranty is not transferable and will expire exactly 12 months from the date of receiving the purchase.

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Unit 1010, Miramar Tower, 132 Nathan Road, Tsim Sha Tsui Kowloon, Hong Kong
www.wickedlasers.com | support@wickedlasers.com

Manufacturer's Warranty

This warranty does not include defects or damages attributable to misuse, normal surface weathering, or damages caused by accidents or fire or other casualty or force majeure or any other causes or occurrences beyond the manufacturer's control.

To claim your warranty, please send this form or email **support@wickedlasers.com** with the following information:

Full Name: _____

Address: _____

_____

_____

Order ID / Laser Model: _____

Reason for Claim: _____

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